

The Manx Race of *Maniola jurtina* (L.) (Lep., Satyridae)

By GEORGE THOMSON, F.R.E.S.

The Isle of Man is, I am told, an accessible and popular holiday spot. This being so, it is a little surprising that the interesting nature of *Maniola jurtina* (L.) on the island has virtually escaped the attention of those who have worked on *jurtina* or the Manx fauna. Unfortunately, I have not had the opportunity to collect there myself, and it was not until this year that, through the kindness of Mr J. M. Chalmers-Hunt and his two friends Mr J. Pugh and Mr J. Hedges, that I was able to obtain a series of thirty-three specimens of the species (consisting of 19 males and 14 females) from various localities on the island, collected during 1970. This, although a short series, was remarkably homogenous for a *jurtina* sample and clearly indicated the nature of this race. Three specimens sent to me for examination by Mr P. W. Finbow pointed to the same conclusion which I am about to detail.

The only mention of the Manx race, other than as part of a distribution list, which I have been able to find was by Graves (1930) in his discussion of the British *jurtina*. He commented: (p. 75) '... *jurtina* of both sexes from the Isle of Man resembles very small Irish specimens ...'

Higgins and Riley (1970) include them with *splendida* B.-White, but it should be noted that they extend this name to cover not only the north-west Scottish form, but also the Irish (*iernes* Graves) and the Scillonian races (*cassiteridum* Graves).

[I believe this treatment of the situation in the British Isles is valid only if *all* the Atlantic races are included under the name *splendida* (i.e., *splendida*, *iernes*, *cassiteridum* and *insularis* Thomson) which is, after all, the earliest available name for a distinct British race. To exclude *insularis* from this group is to deny the fact that it is closer to the Irish race than to any other. Furthermore, the type of geographical variation seen in *splendida* and *cassiteridum* is in a direction away from that of central and northern Europe, while *iernes* is an intensification of it.]

On examining the specimens that I had received it was at once obvious that they belonged to a race much akin to that of Ireland. The most distinctive features of *iernes* are well developed in the Manx form: in the male, frequent bipupillation of the apical eyespot or a doubling of it (f. *erymanthoides* Esp.), a well developed sub-apical fulvous band, and a very distinct light sub-marginal band on the underside hindwing; while in the female, extensive fulvous on the upperside and a very bright, contrasty underside. Furthermore, seven of the thirty-three specimens (2 males and 5 females) were of the form *addenda* Mousley which is frequent in the Irish race. In spite of these characters linking them closely with *iernes*, they

contrasted sharply and consistently with them in size. Irish males are strikingly large with a wingspan of from 46 mm. to more than 57 mm., averaging nearly 52 mm., while the females range from 50 mm. to 62 mm., averaging nearly 56 mm. However, two series from the Aran Islands of Inishman and Inishmore, kindly collected for me by Mr T. C. Dunn in 1969 and 1970, are smaller than those from the Irish mainland, averaging almost 50 mm. in the male but very little smaller in the female. Graves also knew of an 'exceptionally small' race from Rush, Co. Dublin. Besides the Aran series the Manx specimens are diminutive. Indeed they are smaller than any of my series from individual locality in Britain or Europe, smaller even than the typical sub-species of Sweden¹. The actual measurements are shown in Table 1 together with figures for *jurtina* from south-west Sweden, British *insularis* and *iernes* from the two Irish Arans and the Irish mainland.

TABLE 1

Locality	Males			Females		
	average	largest	smallest	average	largest	smallest
A Isle of Man	45.2	48.0	40.0	48.9	53.0	45.0
B South-east Sweden	46.2	50.0	41.0	50.6	53.5	43.0
C Britain	48.0	55.0	38.0	53.0	60.0	42.0
D Inishmore, Aran	49.5	52.0	47.0	53.7	55.0	52.0
E Inishmaan, Aran	50.3	57.0	44.0	56.0	57.0	55.0
F Ireland	51.9	57.5	46.0	55.6	62.0	50.0

The wingspan in millimetres of various races and populations of *Maniola jurtina* (L.). All measurements taken as twice the distance from the centre of the thorax to the apex. The figures for Britain (C) exclude north-west Scotland, Ireland and the Isles of Scilly.

¹Verity (1913) in his 'Revision of the Linnean Types of Palaearctic Rhopalocera' said that the *jurtina* 'type' in the Linnean collection is of the North African race known as *fortunata* Alph. Although the specimen is certainly of southern European origin, I would say that it was more likely to be from south-east France or Spain. However, as Lindroth (1957) has pointed out, 'Linnaeus never designated any specimen as a type. Whether his description was based on one single or on several specimens it cannot even be taken for granted that these were preserved in his collection, or, the original specimen may later have been substituted by another, in better condition, by Linnaeus himself.' Mayr (1969) remarks, 'No nomenclatural decision should ever be made by relying on a "Linnean type". There is no such thing.' Thus, it should be clear that Verity's action in 1913 restricted the type locality of *jurtina* to 'North Africa' in spite of the doubtful origin of the specimen in the Linnean collection, Alpheraky's *fortunata* being sunk as a synonym, a solution which has been followed by de Lattin and others. The type locality of *janira* was at the same time restricted to 'Central Europe'.

One of Mr Finbow's specimens, a male taken in 1968, was a remarkable dwarf of the form *parafeminea* Thomson with a wing-span of only 36 mm. Populations consisting of smallish specimens occur in both *splendida* and *insularis*, but as far as I know neither of these races attain such diminutive dimensions as those of the Isle of Man. Little allowance need be made for annual fluctuation as size varies little from year to year in this species, and it is safe to say that the Manx population represents one of the smallest, if not the smallest race of *jurtina* anywhere in its known range, with the possible exception of the form *parvalua* Stauder, recorded from Monte Faito and S. Angelo (Sorrento) which was said to be the size of a female *Coenonympha pamphilus* (L.), but which, for lack of confirmation, must rank with the other apocryphal records of species whose nature or existence is somewhat less than certain.

Considering the geographical situation of the Isle of Man and the fact that morphologically they are close to *iernes*, it was interesting to compare them with samples from the adjacent mainland of Scotland, England and Wales. The very few specimens that I have examined from Galloway make no approach to the Irish race—much less indeed than the individual bright specimens which are found in parts of central Scotland and some maritime localities in the south of England. It would be extremely interesting, however, to examine a series from the extreme south-west peninsular which terminates in the Mull of Galloway as here we might see one of two interesting situations—an approach to *iernes* or a reverse cline. This is, in fact, what I have found in the Colwyn Bay and Great Orme region of north Wales. Here, although the size is almost identical to that of the *insularis* average in both sexes, and the males are also typical of the widespread British race, the females show a marked reduction in the extent of fulvous on the upperside. Often this is strongly veiled with scales of the ground colour. Furthermore, a number of specimens were of a rather unusual colour—a somewhat uniform light sepia—much less reddish or blackish than is usual in Britain, a colouration typical of the eastern races of the species. It is therefore, that much more remarkable that a few of the males have genitalia of the 'eastern type,' but this is a complex subject which is not directly relevant to this discussion and will be dealt with in a paper now in preparation. In short, the north Welsh specimens indicated a movement away from *iernes* to a greater extent than that found anywhere else in Britain. I can trace no approach whatsoever to the Irish form in *jurtina* from Westmoreland, although it certainly would be very interesting to examine the species on the Isle of Walney.

I hope that the individual nature of the Manx *jurtina* will now be recognised by those who have the fortune to see specimens from that Island. A name is not justified for this race, however, as it differs only in one character from *iernes* with which it should be placed but in which it should not be forgotten.

I have to thank Mr J. M. Chalmers-Hunt, J. Pugh, J. Hedges, T. C. Dunn and R. L. Dennis for their very generous help in obtaining material from the region which I have mentioned. Also Mr P. W. Finbow for the loan of three specimens from his collection.

Backcroft, Dunblane, Perthshire. 2.ii.1971.

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Inverness-shire in 1970

By Commander G. W. HARPER, R.N. Retd., F.R.E.S.

The last five years or so have shown a distinct climatic change from the previous fourteen that I have been residing in Badenoch. This change has been characterised in three main respects; first, a reduction in the severity of depth of winter snowfall and higher minimum temperatures, fewer occasions of Zero F. frost readings. This change has been accompanied by more prolonged winters, starting much earlier and extending well into May. Thirdly, the summers have become colder, windier and less sunny. I think that these three changes have probably helped predators such as birds and parasites to reduce the population of Lepidoptera, and certainly the bird population locally has made a good recovery from the severe winter of 1962-63. In addition to all this the human destruction of our small local entomological habitats by Forestry Commission and other developers proceeds apace in spite of the rare successes of conservationists. A classic example of this vandalism perpetrated by a proprietor and the Forestry Commission, which is officially committed to pay due attention to conservancy considerations should be publicised. About 1955 the Nature Conservancy, at my request and duly furnished by me with the facts of many rare and local plants and insects occurring on the western cliff and scree of Greag Dhub near Newtonmore, officially declared this most interesting and restricted habitat to be a S.S.I. (Site of Scientific Interest). About 1965 I noticed suddenly that a 40 acre strip of this steep and rough hillside had been cleared and fenced, and a year or so later planted with Douglas Fir, an entirely alien tree in the very centre of this area. When I drew the attention of the regional Forestry Commission Officer to this lamentable happening, he seemed to be sincerely sorry about it, and pleaded ignorance of